

NUMERICAL CONTROL UNIT

5

ABSTRACT OF THE DISCLOSURE

10 A numerical control unit having a load monitoring  
function for monitoring a load on a tool drive source  
during a machining operation. The numerical control unit  
includes a load monitoring section for monitoring the  
load on an electric motor; a wear recognizing section for  
recognizing the current extent of tool wear; a storing  
section for storing a plurality of preset limit load  
15 values corresponding individually to predetermined  
various extents of tool wear; a calculating section for  
calculating the current limit load value corresponding to  
the current extent of tool wear recognized in the wear  
recognizing section, based on the plurality of preset  
20 limit load values stored in the storing section; and a  
comparing section for comparing the load on the electric  
motor, monitored in the load monitoring section, to the  
current limit load value calculated in the calculating  
section, and for judging on the abnormality of the load.  
25 The wear recognizing section recognizes the current  
extent of tool wear by using one parameter selected from  
a group consisting of the number of times of use of a  
tool, the duration of cutting by a tool, the distance of  
cutting by a tool and the number of times of execution of  
30 machining program. The load monitoring section monitors  
at least one of maximum value, average value and minimum  
value of the load in a certain procedure of a machining  
program.